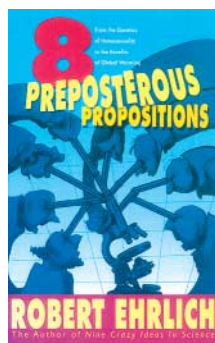


Eight controversies

Andrzej Stasiak

**Eight Preposterous Propositions:
From the Genetics of Homosexuality to
the Benefits of Global Warming**
by Robert Ehrlich
Princeton University Press, Princeton,
NJ, USA
342 pages, \$28/£19
ISBN 0691099995



There's a joke in which an experimental physicist tells his colleague, a theoretician, that their experiment has shown that value A is greater than value B. The theoretician replies that he can explain very well why A should be greater than B. But

then the experimental physicist reveals that in his excitement he has made a mistake, and in fact the experiment has shown that B is greater than A. The theoretician replies right away that he can prove that this must be the case. Robert Ehrlich, a Professor of Physics at George Mason University (Fairfax, Virginia, USA), is most likely a theoretician as he can argue both sides of a debate with almost equally convincing power. In his latest book *Eight Preposterous Propositions*, Ehrlich presents eight ideas that are the subjects of such debate, the majority of which are controversial topics from a scientific, cultural or political point of view. In addition, some of these topics concern our everyday life and are subjects of our everyday thinking. The eight controversial ideas are developed in separate chapters: Is homosexuality primarily innate? Is intelligent design a scientific alternative to Evolution? Are people getting smarter or dumber? Can we influence matter by thought alone? Should you worry about global warming? Is complex life in the

universe very rare? Can a sugar pill cure you? And finally, should you worry about your cholesterol?

All of the chapters are very well researched and the author's arguments are based on quoted sources, including recent publications in top scientific journals. Ehrlich describes each controversial idea without apparent bias and provides arguments for both the positive and negative answers. At the end of each chapter Ehrlich gives his own judgment on the subject but as expected, the answer is rarely a simple 'yes' or 'no'. Surely, most of us have preconceptions about some or all of the eight subjects of discussion, and it is interesting to witness our favourite arguments being demolished or upheld by the author. For me, the most eye-opening chapter was the one on the placebo effect ('Can a sugar pill cure you?'). I knew that the placebo effect can greatly contribute to the action of a painkiller but did not expect, for example, that the same effect can be observed after surgery and that in a "recent double-blind trial involving 300 patients, a laser surgical procedure to unblock clogged arteries was shown to be no more effective than placebo surgery." Ehrlich also describes the 'nocebo', or anti-placebo, effect that occurs when a physician tells a patient that there is nothing that can be done and that the patient has just a few months to live. A particularly interesting nocebo effect is connected with a peculiar linguistic coincidence. The words for 'four' and 'death' in Japanese, Cantonese and Mandarin are pronounced nearly the same and therefore this number is considered to be very unlucky by Chinese and Japanese people. Studies on the influence of psychological stress on the timing of death published in the *British Medical Journal* in 2001 revealed that more deaths from chronic heart disease occurred on the fourth day of the month among the Asian population in California (where death certificates and medical statistics are more detailed than in China). The nocebo or voodoo effect was so strong that the mortality

rate on the fourth day of the month was 27% higher than the average of the other days. The data that were collected between 1973 and 1998 also indicated that no such fourth-day peak of heart attacks was observed among Caucasian Americans. This revealing chapter on the placebo effect may be noxious to some readers, because many of the medications we take rely on the placebo effect, and this effect might 'evaporate' after reading the chapter. Any such harm should, however, be compensated for by the acquired diminished sensitivity to the nocebo effect.

Many readers like me will probably be interested in the chapter 'Should you worry about cholesterol?' Ehrlich discusses very well the relationship between diet and coronary heart disease and also looks critically at drugs that lower the cholesterol level, known as statins. He goes under the surface to reveal the minutes of the US Food and Drug Administration Advisory Committee meeting that evaluated gemfibrozil, one of several statin drugs now in use. Only three out of nine committee members believed that the potential benefits of this drug for the prevention of coronary heart disease outweighed the potential risks. Despite this, the drug was approved and is widely prescribed today. In notes at the end of the book, Ehrlich mentions the 2001 recall of another statin, Baycol, after it was linked to 31 deaths, some of which occurred in patients also taking gemfibrozil.

After reading Ehrlich's book, I now worry less about my cholesterol but also worry less about global warming (although the latter attitude is not politically correct). Each chapter provides interesting reading and for those who enjoy this type of presentation, I would also recommend Ehrlich's previous book, *Nine Crazy Ideas in Science* (EMBO Reports 2: 978 (2001)).

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doi:10.1038/sj.embor.7400102